

### **REMARKS**

Claims 1-45 are currently pending in the subject application and are presently under consideration. Claims 1, 3, 4, 20, 35, 39 and 41 have been amended and claims 2, 21 and 40 stand cancelled as shown on pages 2-8 of the Reply.

Favorable reconsideration of the subject patent application is respectfully requested in view of the comments and amendments herein.

#### **I. Rejection of Claims 1, 20, and 39 Under 35 U.S.C §112**

Claims 1, 20, and 39 stand rejected under 35 U.S.C §112, first paragraph, as failing to comply with the enablement requirement. Withdrawal of this rejection is requested for the following reasons. Independent claims 1, 20 and 39 have been amended herein to include the step of exchanging messages with the foreign terminal, when the signal strength is determined to be below a threshold. The specification at paragraphs [0011] and [0034] discloses the claim limitation of ‘establishing a peer-to-peer connection with the foreign terminal’ as recited in the claims. Accordingly, it is requested that this rejection be withdrawn.

#### **II. Objection to Claims 44 and 45**

Claims 44 and 45 are objected to because of the following informalities: Misnumbered claims 40 and 41 have been renumbered as 44 and 45. For examination purposes, the claims will be rejected as 40 and 41. Withdrawal of this rejection is requested for the following reasons. Claim 40 has been cancelled herein, and claim 41 has been amended to depend from claim 1. Accordingly, it is requested that this rejection be withdrawn.

#### **III. Rejection of Claims 1-6, 8-11, 13-16, 18-25, 27-30, 32-35, 37-39, and 40-43 Under 35 U.S.C. §103(a)**

Claims 1-6, 8-11, 13-16, 18-25, 27-30, 32-35, 37-39, and 40-43 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Gandolfo (US 7,184,767) in view of Choi (US 6,967,944). Withdrawal of this rejection is requested for the following reasons. Gandolfo and Choi, alone or in combination, fail to teach or suggest all features recited by the subject claims.

The subject claims relate to systems and techniques to schedule asynchronous transmissions within a network. A communications terminal configured to operate in a piconet

includes a receiver configured to detect a pilot signal from a foreign terminal and determine its strength, and a controller configured to establish a peer-to-peer connection with the foreign terminal to support communications if the pilot signal strength is below a threshold. The controller is further configured to support intra-piconet communications. In particular, amended independent claim 1 recites *a method of communications from a piconet, comprising: engaging in intra-piconet communications; receiving a pilot signal from a foreign terminal; determining strength of the pilot signal and exchanging messages with the foreign terminal if the strength of the pilot signal is below a threshold; and establishing a peer-to-peer connection with the foreign terminal*. Independent claims 20 and 39 recite similar features. Gandolfo and Choi, alone or in combination, are silent regarding such novel features.

Gandolfo relates to providing a way of accommodating communications between devices associated to different wireless networks without the need of a wired connection, and discloses a scatternet with first network controlled by a first controller and a second network controlled by a second network. However, the system disclosed by Gandolfo allows all devices that are able to communicate with a controller, irrespective of their signal strengths, to be a part of the network controlled by that controller. Thus, Gandolfo teaches away from requiring a power threshold before joining a piconet in order to maintain a high data rate of synchronous communication, while still affording a degree of communication by peer-to-peer communication to such foreign terminals. At the cited portions, Gandolfo discloses an indirect overlapping between the networks, wherein the usable physical areas of the two networks do not overlap. A controller-enabled device from the first network and a device from the second network create a child network and communicate with each other via the child wireless network. Thus, the devices A2-522a and B2-522b are engaged in an intra-piconet communication. However, at page 5 of the Office Action, the Examiner contends that the device 522a receiving a pilot signal from device 522b can be equated to the device 522a receiving a pilot signal from a foreign terminal. Applicants' representative avers to the contrary. The device 522b is within a network formed by controller 522a, and a communication between the device 522b and the controller 522a is an intra-piconet communication, hence the device 522b cannot be termed a foreign terminal with respect to the device 522a. Thus, Gandolfo is silent regarding *receiving a pilot signal from a foreign terminal* as recited by independent claim 1. Further, Gandolfo is silent regarding

***determining strength of the pilot signal and exchanging messages with the foreign terminal if the pilot signal strength is below a threshold*** as recited by independent claim 1.

Choi relates to providing concurrent transmissions between multiple pairs of devices to transmit data within a WLAN, so that network capacity can be increased. At the cited portions, Choi discloses a network with multiple devices and an access point (AP), each of the devices transmit a signal to the AP, the signal strengths of the devices are stored in a table at the AP, and utilized to allocate time for concurrent peer-to-peer transmission between pairs of devices. However, all the devices are part of the same network controlled by the AP, and thus, Choi is silent regarding ***receiving a pilot signal from a foreign terminal***, let alone ***determining strength of the pilot signal and exchanging messages with the foreign terminal if the pilot signal strength is below a threshold*** as recited by independent claim 1.

Thus, the combination of Gandolfo and Choi fails to disclose the features of receiving a pilot signal from a foreign terminal, determining that the strength of the pilot signal is below a threshold and exchanging messages with the foreign terminal. In particular, neither cited reference addresses maintaining a high data rate of communication in the peer-to-peer network by deeming a device with signal strength below a threshold as a foreign terminal. Gandolfo allows all devices that can connect to a controller to be part of that piconet, although this aim is at odds with maintaining a high data rate of the individual piconet. Choi allows hidden devices in a network to perform a peer-to-peer transmission based on the signal strengths and does not contemplate determining the signal strength of a foreign terminal. The combination of Gandolfo and Choi, either singularly or in combination still fail to address the problem of how to deal with the problem of continued communication with the foreign terminal, reverting between registered piconet member communication and peer-to-peer communication in order to not adversely affect intra-piconet data transmission rates yet maintaining some level of communication with the foreign terminal.

In view of at least the foregoing, it is readily apparent that both Gandolfo and Choi, fail to teach or suggest all limitations of the claimed invention. Accordingly, it is respectfully requested that rejection of independent claims 1, 20 and 39 (and the claims that depend there from) be withdrawn.

**IV. Rejection of Claims 7, 12, 26, and 31 Under 35 U.S.C. §103(a)**

Claims 7, 12, 26, and 31 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Gandolfo in view of Choi and further in view of Watanabe *et al.* (US 2002/0080855). It is respectfully requested that this rejection be withdrawn for at least the following reasons. Claims 7, 12, 26 and 31 depend from independent claims 1 and 20. Watanabe *et al.* relates to a method for performing wireless communication using spread spectrum frequency hopping, but does not make up for the aforementioned deficiencies of Gandolfo and Choi with respect to independent claims 1 and 20. Thus, the subject invention as recited in the subject claims is not obvious over the combination of. Accordingly, it is respectfully submitted that this rejection of independent claim 1 and 20 (and the claims that depend there from) should be withdrawn.

**V. Rejection of Claims 17 and 36 Under 35 U.S.C. §103(a)**

Claims 17 and 36 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Gandolfo in view of Choi, and further in view of Papasakellariou *et al.* (US 7,133,435). It is respectfully requested that this rejection be withdrawn for at least the following reasons. Claims 17 and 36 depend from independent claims 1 and 20. In particular, Papasakellariou *et al.* relates to an interference cancellation system, but does not make up for the aforementioned deficiencies of Gandolfo and Choi with respect to independent claims 1 and 20. Thus, the subject invention as recited in the subject claims is not obvious over the combination of. Accordingly, it is respectfully submitted that this rejection of independent claim 1 and 20 (and the claims that depend there from) should be withdrawn.

**VI. Rejection of Claims 44 and 45 Under 35 U.S.C. §103(a)**

Claims 44 and 45 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Gandolfo in view of Choi and further in view of Iacono *et al.* (US 2005/0176468). It is respectfully requested that this rejection be withdrawn for at least the following reasons. Claims 44 and 45 depend from independent claims 1 and 20. Iacono *et al.* relates to a wireless multi-cell communication system, but does not make up for the aforementioned deficiencies of Gandolfo and Choi with respect to independent claims 1 and 20. Thus, the subject invention as recited in the subject claims is not obvious over the combination of. Accordingly, it is respectfully submitted that this rejection of independent claim 1 and 20 (and the claims that

depend there from) should be withdrawn.

### CONCLUSION

The present application is believed to be in condition for allowance in view of the above comments and amendments. A prompt action to such end is earnestly solicited.

In the event any fees are due in connection with this document, the Commissioner is authorized to charge those fees to Deposit Account No. 50-1063 [QUALP842US].

Should the Examiner believe a telephone interview would be helpful to expedite favorable prosecution, the Examiner is invited to contact applicants' undersigned representative at the telephone number below.

Respectfully submitted,

AMIN, TUROCY & CALVIN, LLP

/Himanshu S. Amin/

Himanshu S. Amin

Reg. No. 40,894

AMIN, TUROCY & CALVIN, LLP  
57<sup>TH</sup> Floor, Key Tower  
127 Public Square  
Cleveland, Ohio 44114  
Telephone (216) 696-8730  
Facsimile (216) 696-8731